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ABSTRACT

Parents, educators, psychologists, and linguists are concerned about the effects of bilingualism on children, particularly young children. Although it is generally agreed that the minority-language child should develop bilingual and bicultural competence, there is disagreement concerning the role the two languages should play in the child's early language development. However, when reviewing studies dealing with the effects of early bilingualism on the child's cognitive and language development, academic performance, and self-concept, it appears that this disagreement or inconsistency has more to do with the state of the art in research methodology than with the quality of bilingual education itself. Current research methods have not been successful enough in separating outside variables such as attitudinal factors, socioeconomic factors, the influence of the home, and individual difference factors among children from the factor of bilingualism itself. In conclusion, although research findings detect a slight inclination towards the support of early bilingualism, more questions remain unanswered than are answered, thus preventing a definitive answer to support either the pro or the con position on early bilingual education. (MP)

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# Issues in Early Childhood Bilingualism:

# Pros and Cons

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# Issues in Early Childhood Bilingualism:

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## Introduction

Parents, educators, psychologists and linguists are interested and concerned about the effects of bilingualism on children, particularly young children. Although it is generally agreed upon that the minority language child should develop bilingual and bicultural competence, there is disagreement concerning the role which the two languages should play in the child's early language development. In order to further clarify the issues, this review will present the pros and cons with special attention to the effects of early childhood bilingualism on: (1) cognitive and language development; (2) interference between the languages; (3) age variables in second language learning; (4) academic achievement; and (5) self-concept.

## I. Cognitive and Language Development

Intelligence and cognitive development. In summarizing the findings of early studies concerning the effects of bilingualism on intelligence and cognitive development, Darcy (1953) stated that the investigators who conclude that bilingualism has a favorable effect are in the minority. Beneficial effects from bilingualism were reported in two studies (Davis & Hughes, 1927; Stark, 1940), but Darcy (1953) questioned the research methodology of both studies particularly in the treatment of variables such as socio-economic status and degree of bilingualism.

Generally, the literature has reported that bilinguals suffer from a language handicap when measured by verbal tests of intelligence. Studies by Saer (1923), Pintner and Keller (1922), Brown (1944) and many others suggest that bilinguals receive significantly lower scores in a variety of intelligence tests. However, as in the studies reporting positive effects, many of these earlier studies suggesting that bilingualism has a negative effect on intelligence have serious methodological weaknesses. Findings from more recent studies which have been better controlled have shown that bilingualism does not have a negative effect when assessed by nonverbal

intelligence measures and, in fact, that it may even positively influence mental development. Recent studies have also shifted away from the use of standardized intelligence measures when comparing the performance of monolinguals and bilinguals on specific cognitive tasks. One reason for this shift has been the intent of researchers to further study the nature of the effects of bilingualism on intelligence by using a variety of measures.

Studies examining bilinguals' and monolinguals' cognitive development have reported using a number of differing cognitive tasks. Ianco-Worrall (1972), for example, examined the bilingual child's early ability to separate word sound from word meaning. In a recent study, Oren (1981) reported that bilingual children showed greater cognitive flexibility with regard to naming and relabeling objects. Liedtke and Nelson (1968) found that bilingual children performed significantly better than monolinguals in a conservation of length task. Bilinguals were also found to be superior to monolinguals in divergent thinking tasks (Carringer, 1974; Landry, 1974). In contrast to these results, Torrance, Gowan, Wu & Aliotti (1970), reported that bilingual students in Singapore performed at a significantly lower level than monolingual children on the Torrance Test of Creative Thinking, another measure of divergent thinking.

Several explanations have been given to support the positive effects of bilingualism on cognitive development. These have been both linguistic and nonlinguistic. Nonlinguistic explanations include: (1) the greater amount of social interaction and explicit teaching which the bilingual child is exposed to as a result of learning two languages (Liedtke & Nelson, 1968); (2) the exposure to an enriched environment (Peal & Lambert, 1962); and (3) a greater flexibility in thinking due to having to switch between two languages (Balkan, 1970). The main linguistic explanation of the positive effects of bilingualism on cognitive development is the objectification hypothesis (Cummins & Gulutsan, 1975). According to this hypothesis the bilingual child attends to the essential attributes of objects and to his/her linguistic operations as a result of hearing two languages. This process is thought to be essential for cognitive development (Bain, 1976).

The above results with regard to the positive effects of bilingualism on cognitive development need to be treated with caution since many of the

studies have involved the use of middle class children for whom the two languages are balanced. Subjects in earlier studies however were often working class children who were dominant in one of the languages. Several researchers suggest the possibility that it may take a certain amount of intelligence to become a balanced bilingual (see, e.g., Peal & Lambert, 1962). Using balanced bilinguals as subjects may thus have the effect of confounding the factor of general intelligence with bilingual ability (Wagner, 1980). Nevertheless, the results are intriguing. Furthermore, cognitive advantages in connection with bilingualism have also been found in subjects from lower class backgrounds (Ben-Zeev, 1977b; Feldman & Shen, 1971).

Language development. A number of studies have suggested that the bilingual child, at an early age, may not achieve monolingual vocabulary norms in either language (Doyle, Champagne, & Segalowitz, 1977; Smith, 1931). In studies involving middle class and lower class children, Ben-Zeev (1977, a, b) reported lower vocabulary scores for bilinguals as compared to monolinguals when matched for IQ. Bilingual children may also lag several months behind in the development of certain syntactic structures according to Swain (1972). With regard to grammatical errors, both Carrow (1957) and Smith (1933) report that bilinguals make more errors than monolinguals. Carrow (1957) also looked at articulation and found that monolinguals were superior to bilinguals.

Contrasting with these studies are the findings by Jensen (1962), Padilla and Liebman (1975) and Padilla and Lindholm (1976, 1977) that bilingual children develop language at the same rate as monolinguals in each of their languages. Contradictory findings in many cases can be explained by factors such as what aspects of language development have been studied, the similarities and differences between the languages in question, the ages of the children, and the opportunity for exposure to each language in the child's environment. The restriction of one of the languages to certain domains, e.g., the home, is an explanation often given for weaker performance in one of the languages. In line with this, Carrow (1957) suggests that in homes where there is a wide range of experience in each language and where good speech models are present, bilingual children may not experience any problem in either language. Garcia (1981), after reviewing the litera-

ture on early childhood bilingualism, likewise suggests that the acquisition of two languages does not mean that either of the languages has to suffer. The two languages may not always develop in parallel fashion however due to factors within the environment.

## II. Interference Between the Languages

A major concern in connection with the simultaneous introduction of two languages during early childhood has been that of interference. Several points should be recognized in connection with interference, however. Firstly, a number of empirical studies of bilingual acquisition in natural settings have not shown interference to be a significant problem. Secondly, interference may not reflect a "confusion" between the languages but may be based on other factors. Thirdly, interference occurring in simultaneous acquisition of two languages may be less problematic than that occurring in successive acquisition.

With regard to the first point, studies investigating the acquisition of two languages in young bilingual children have not found interference to occur in more than two to four percent of the child's total utterances (Arnberg, 1981; Lindholm & Padilla, 1977, 1978; Swain & Wesche, 1975). Interference can also be minimized when the languages are differentiated according to specific domains and when they are kept in balance (McLaughlin, 1978).

Furthermore, there is a tendency to judge interference from an adult standard rather than in light of its significance from the point of view of the child. Arnberg (1981) in studying language acquisition in Swedish-English speaking children found that in many cases interference occurred for any of the following reasons:

1. in imitating an utterance used by the interlocutor
2. when a word was known in only one language
3. when a word was simpler in one of the languages
4. when the child preferred the sound of a word in one language over the other.
5. because of sociolinguistic factors, e.g., mixed forms being used with speakers from only one language group and not the other.

Even if there is evidence that mixing is often due to the above factors this does not mean that a confusion between the two languages is not also involved. Preliminary results from a study of awareness of bilingualism in young bilingual children (Arnberg, research in progress) indicate that a failure to separate the languages may account for some cases of language mixing. The results also indicate, however, that through the use of certain strategies in the home (e.g., a one person; one language strategy) as well as through exposure to the two languages in a variety of settings, the young child may be facilitated in his/her awareness of having two separate codes, thus leading to a decrease in mixing.

Finally, a number of researchers have suggested that, with regard to interference, simultaneous acquisition may be easier for the child than successive acquisition. Hakes (1965) suggests that the bilingual's language difficulties stem from a negative transfer situation in which a second response to the same stimulus must be learned. The previously learned response will interfere with the learning of the new response in that the new learning will be more difficult than if there had been no prior learning. Carroll (1969) and Taylor (1974) thus suggest that simultaneous bilingual acquisition, although it may cause an initial delay in language development, may be easier for the child in the long run because previously established habits do not need to be overcome.

## III. Age Variables in Second Language Learning

Recent research findings have increasingly demonstrated that older children and adults are better second language learners although these findings may not be applicable to the areas of pronunciation (Asher & Garcia, 1969). Although older learners may be better than younger ones in absolute terms, e.g., in the number of words or concepts known in a second language, the younger child has an advantage. This is because the vocabulary, grammar, and experiential world of the young child is highly limited. Thus, the child has less to accomplish in order to "catch up" to native speaking peers (Ekstrand, 1981a). In addition, there are other reasons why a second language should be introduced as early as possible. Discussion about the time it takes to learn a second language, attitudinal factors, language

learning strategies in early childhood, and the amount of time available to the young child for language learning follows.

Second language learning requires time. One important reason for learning a second language at an early age is simply because the language-learning process is a long and time-consuming one. Thus, the advantage of an early start is that it allows more time for learning (Carroll, 1969). Barker and Schwartz (1981) studied the effects of varied English and Tagalog instruction across grades 1-6 in 18 Phillipino classrooms. Their findings indicated that English proficiency was directly related to the number of years in which it was used as a medium of classroom instruction. Some studies in Sweden (Mägiste, 1979) have indicated that it may take up to four or five years to achieve a good level of comprehension in a second language and slightly longer for production.

Attitudinal factors. The open attitudes of young children make the preschool years a beneficial time for language learning. Taylor (1978) suggests that children identify easily with speech models and are not inhibited about trying "incorrect" sounds and utterances. This is supported by Wieczerkoski (1978) who suggests that during the preschool years children have an easy contact with the environment. Mistakes or deviations from the norm do not bring about learning blocks as the children do not reflect on their own and/or others' mistakes.

Cornejo (1981) suggests that young children are not aware of speaking different languages but focus more on getting what they want. Thus they do not reason in terms of using different languages but learn the languages "'inadvertently' while busy playing and acquiring knowledge about the world" (Taylor, 1978). This ability was demonstrated in a study by Castillejo (1933) in which preschool children learned to speak three to four languages through interacting with native speakers of the languages. Learning a second language in communication situations which are intrinsically meaningful has been found to be highly advantageous (Krashen, 1983; Macnamara, 1973). Family members and relatives provide meaningful communicative input to children and are also an important part of young children's lives in contrast to older children for whom the influence of the peer group and school dominate (See Kuo, 1974).

Taylor (1978) reports that learning in early childhood occurs in situational contexts which are simple, unambiguous, immediate and relevant. Second language learning which involves a state of activity on the part of the learner is beneficial and provides opportunities for feedback cues from the environment. And, according to Ekstrand (1981b), small children learn sentences, grammar and intonation patterns as unities which means that they can communicate at an early stage in their language development. Bilingual acquisition during early childhood also takes advantage of the young child's imitative faculties (Penfield & Roberts, 1959).

The young child has time for language learning. Finally, young children have more time than older children to learn languages because acquiring language and gaining knowledge about the world are the main activities of young children.

Some precautions related to age variables in second language learning. Although the preceding discussion has suggested a number of reasons supporting the introduction of a second language during the early years, one area which needs further investigation concerns the effects of learning a second language during certain critical developmental periods. An example of one such period in the area of private speech is that between the ages of three to five years (Vygotsky, 1962).

Private speech or egocentric speech (Piaget, 1926) is defined as communication with self (Amodeo, 1983) or nonsocial speech forms with self-communicative functions (Kohlberg, Yaeger & Hjertham, 1968). A number of research findings have indicated the critical role private speech plays in the development of self-directed and self-controlled behavior as well as in thinking and problem solving (Meichenbaum & Goodman, 1976; Kohlberg et al., 1968).

Amodeo (1983) in one of the few studies known to investigate private speech in monolingual and bilingual preschool children found a significant difference, in favor of the monolingual children, in the proportion of subjects using private speech. It was found that functional differences in the production of private speech occur when a bilingual child is placed in a culturally different environment. Bilingual children in this situation responded by either speaking English, the language of the setting, or not speaking at all. This was complicated by the fact that the bilingual children had a less than native-like proficiency in English.

These results indicate that for bilingual children, being placed in an environment in which they feel inhibited in using their more familiar language may have serious consequences for problem solving activities. Although the intention here is not to suggest that second language learning be delayed beyond the preschool years, what is being suggested is that more information is greatly needed concerning ways in which bilingualism may influence basic developmental processes.

## IV. Academic Achievement

Academic achievement scores for language minority groups (potential bilinguals) in the United States as recorded in the 1966 Coleman report indicate that the longer the language minority students stay in school, the further they fall behind in grade level achievements. For example, by the 12th grade the Mexican American student is 4.1 years behind the norm in math achievement; 3.5 in verbal ability, and 3.3 in reading. However, these statistics do not distinguish between those students who learned both languages at an early age and those students who were immersed in a second language upon entry into the schools.

Löfgren's (1981) study on bilingualism during early childhood found no negative effects upon academic achievement. Results from bilingual programs for Finnish-Swedish speaking children in Sweden have shown that the program participants reach the same level in Swedish as their Swedish classmates by grade three and perform equally well on measures of mathematics (Löfgren & Ouvinen-Birgerstam, 1980). Children participating in an only Finnish or mother tongue program did not achieve native-like proficiency in Swedish, nor was this achieved in Finnish due to the difficulty of attaining native like norms in a country where the second language is not an official language (Ekstrand, 1980). Dulay and Burt (1979) summarized findings from their earlier literature reviews on the effects of bilingual education which suggested that bilingual education was effective for Limited English Speaking students. Including only studies which were methodologically strong, of the 59 findings concerning the academic achievement of bilingual children, 58% were positive, 41% were neutral, and only 1% was negative.

V. Self Concept

Little information is available regarding the self concept of children who could be classified as early childhood bilinguals; however, a number of authors emphasize the importance of early bicultural development for a positive identity. Bhatnagar (1980) in a Canadian study compared ratings of academic, linguistic, and social behaviors of immigrant children by teachers with the language patterns found in the homes. Those immigrant students whose parents had kept exclusively to the old language and cultural ways did not perform well academically or socially. Those children whose parents had made a complete switch to the dominant language performed a little better. The children who performed best linguistically, academically, and socially, however, were those coming from homes where both languages were spoken. The superior performance of the children in this group may not be due to language factors alone but a third variable such as attitudes toward or adjustment to both cultures by parents. Lambert (in Joseph, 1981) suggests that delays in introducing the second language should be avoided and that waiting until school age is already too late. Not only do the children face ridicule by other children if they do not know the second language, but bilingual infants grow up to be more tolerant and open minded about ethnicity.

VI. Summary and Conclusions

In a recent statement by the National Foundation for the Improvement of Education concerning the inconclusiveness of research findings on bilingual education, it was stated that most of the apparent inconsistencies had more to do with the state of the art in research methodology than with the quality of bilingual education itself. A parallel can be drawn with research concerning the effects of bilingualism. Current research methods have not been successful enough in separating outside variables such as attitudinal factors, socioeconomic factors, the influence of the home, and individual difference factors among children from the factor of bilingualism itself. This has undoubtedly led to many of the inconsistencies in the findings. Correlative studies which have been the predominant form of research in the area are particularly susceptible to the problem of con-

founding of variables. In the future, more experimental studies should thus be carried out. Other difficulties with regard to research methodology are the complexity of some of the factors involved, for example, language proficiency, and the difficulty of measuring them. Also greatly needed are more longitudinal studies, for example, in the areas of vocabulary and syntactic development. This would be particularly indicated in light of Jensen's (1962) findings that by about age 13 bilingual children eventually catch up with monolingual children.

Current endeavors by researchers to determine the effects of bilingualism may, in the future, provide some clarity to the issues. At the present time, however, more questions remain unanswered than answered. Thus, there is not a definitive answer to support either the pro or the con position. When reviewing the available information however it seems possible to detect a slight inclination towards the support of the positive position. Research findings have indicated that bilingualism need not have a negative effect on intellectual, cognitive, or language development, and that during some circumstances it may even have a positive effect. Interference has not been found to be a significant problem in studies of children acquiring two languages simultaneously, nor has academic achievement been found to suffer. Seen together with the advantages of the early years for language learning and the importance of the young child's communication with both the family and the outside world, there appear to be a number of reasons for encouraging bilingualism during the early years. One area which researchers need to concentrate more on in the future, however, concerns whether there are any critical age or developmental periods during which the introduction of a second language should be avoided. Perhaps the greatest task for the future is to study <u>why</u> bilingualism seems to have a positive effect in some cases and a negative one in others in order to better understand the effects of bilingual acquisition during the early years.

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